SUNNEN

MSDS 07

MATERIAL SAFETY DATA SHEET

NFPA DESIGNATION 704		
HAZARD RATING	- HEALTH	2 -
4=Extreme		
3=High	- FIRE	4 -
2=Moderate		
1=Slight	- REACTIVITY	1 -
0=Insignificant		
	- SPECIFIC HAZARD	NONE -

SECTION 1 NAME AND PRODUCT

MANUFACTURER'S NAME: SUNNEN PRODUCTS COMPANY
ADDRESS: 7910 Manchester Ave.
St. Louis, Mo. 63143
United States of America

CONTACT: Terry Heller
EMERGENCY PHONE NO: 314-781-2105
APPROVED BY: Terry Heller
TITLE: Manager, Materials R/D
DATE: August 15, 1987

TRADE NAME, COMMON NAME OR SPECIFICATION: **Sunnen Spray Paint LBB-90438 or MBB-90437**
CHEMICAL FAMILY: AEROSOLS, PAINT
CLASSIFICATION- SHIPPING NAME:Compressed Gas N.O.S., HAZARD CLASS:Flammable gas, DOT SHIPPING CLASS:ORM-D, ID Number:UN1954

SECTION 2 HAZARDOUS INGREDIENTS/IDENTITY (PER 29 C.F.R. 1910.1200(g))

COMMON NAME	CHEMICAL NAME OF COMPONENTS	CAS NO.	OSHA PEL	ACGIH TLV-TWA	CARCINOGENIC
PAINT					
XYLOL	XYLENE	1330-20-7	100 PPM	100 PPM	NO
N-BUTYL ACETATE	ACETIC ACID, BUTYL ESTER	123-86-4	150 PPM	150 PPM	NO
TOLUOL/LACOLENE	TOLUENE	108-88-3	200 PPM	100 PPM	NO
ISOPROPYL ALCOHOL	ISOPROPYL ALCOHOL	67-63-0	400 PPM	400 PPM	NO
METHYL ETHYL KETONE	2-BUTANONE	78-93-3	200 PPM	200 PPM	NO
BUTYL CELLOSOLVE	ETHANOL, 2-BUTOXY	111-76-2	50 PPM (skin)	25 PPM (skin)	NO
N-BUTANOL	BUTYL ALCOHOL	71-36-3	100 PPM	50 PPM (skin ceiling)	NO
METHYL ISOBUTYL KETONE	2-PENTANONE, 4-METHYL	108-10-1	100 PPM	50 PPM	NO
TITANIUM DIOXIDE	TITANIUM DIOXIDE	13463-67-7	15 mg/m cu	10 mg/m cu (dust)	NO
LEAD CHROMATE (1)	LEAD CHROMATE (1)	12656-85-8	.05 mg/m cu	.05 mg/m cu	NO*
IRON OXIDE (2)	IRON OXIDE (2)	1309-37-1	10 mg/m cu (fume)	5 mg/m cu (fume)	NO
SOLVENT/PROPELLANT					
ACETONE	ACETONE	67-64-1	750 PPM	750 PPM	NO
DIACETONE ALCOHOL	DIACETONE ALCOHOL	123-42-2	50 PPM	50 PPM	NO
ISOBUTANE	2-METHYL-PROPANE	75-28-5	800 PPM	800 PPM	NO
PROPANE	PROPANE	74-98-6	1000 PPM	NAIF	NO
N-BUTANE	N-BUTANE	106-97-8	NAIF	NAIF	NO

PPM=Parts per Million. NAIF=No applicable information found. (1) LBB-90438 only. (2) MBB-90437 only.
* ACGIH lists Lead Chromate as "suspect of carcinogenic potential for man."

SECTION 3 PHYSICAL & CHEMICAL CHARACTERISTICS

SPECIFIC GRAVITY (WATER=1)-- NAIF
REACTIVITY IN WATER--------- NOT REACTIVE
BOILING POINT--------------- < 0 degrees F (< -18 C)
VAPOR PRESSURE (mm Hg)------ NAIF
EVAPORATION RATE ---------- RELATIVE TO BUTYL ACETATE OR ETHER: Propellant is faster. Solvent is slower. Residual material is non-volitile.

SOLUBILITY IN WATER------ < .1% @ 77 F (25C)
APPEARANCE AND ODOR------ COLORED LIQUID WITH ODOR OF SOLVENT.
PERCENT VOLATILE BY VOLUME-- 91%
VAPOR DENSITY (Air=1)------- HEAVIER THAN AIR.

SECTION 4 SPECIAL PRECAUTIONS

HANDLING AND STORAGE: Do not store near fire or flame or where temperature exceeds 120 F (50 C). OTHER: Do not smoke when in use or when fumes are present. Use with positive ventilation.

SECTION 5 CORROSIVITY AND REACTIVITY DATA

STABILITY: Material is stable. POLYMERIZATION: Hazardous polymerization will not occur. INCOMPATIBILITY (materials to avoid): Peroxides or strong oxidizing agents such as chlorine, permanganates, and dichromates. DECOMPOSITION PRODUCTS: Combustion of material will produce oxides of carbon, lead and nitrogen.

SECTION 6 HEALTH, FIRST AID AND MEDICAL DATA.

ACUTE AND CHRONIC HEALTH EFFECTS AND EFFECTS OF OVEREXPOSURE.
Primary routes of entry are inhalation, skin and eye contact. Vapors are anesthetic, irritate the respiratory tract and depress the nervous system. Symptoms include: drowsiness, headaches, dizziness, unconsciousness and coma. Repeated overexposure to solvents is reported to cause permanent damage to skin, eyes, nose, mucous membranes, lungs, thorax, liver, kidneys, brain and central nervous system. Individuals with existing respiratory impairment such as emphysema, may display an increased sensitivity to solvent vapors. ABBREVIATIONS USED IN THE FOLLOWING SECTION: NAIF=No applicable information found. SKIN=Skin absorption. EYE=Eye contact. INHAL=Inhalation. INGEST=Ingestion

ACETIC ACID, BUTYL ESTER (N-BUTYL ACETATE) ACUTE: SKIN: Causes irritation of skin. Nonspecific drying, cracking and increased susceptibility to infection. EYE: Causes eye irritation. INHAL: Causes irritation of upper respiratory system. Headache, drowsiness and drunkenness at high concentration. Affects central nervous system. INGEST: NAIF. CHRONIC: SKIN: NAIF. EYE: NAIF. INHAL: Kidney and blood changes in experimental animals. Affects lungs, thorax and breathing. INGEST: NAIF.

ACETONE: ACUTE SKIN: Skin irritation. Dermatitis. EYE: Liquid or vapors may irritate eyes. INHAL: Irritation of nose and throat. Headaches and dizziness. INGEST: NAIF. CHRONIC: SKIN: NAIF. EYE: NAIF. INHAL: Reports have associated repeated and prolonged occupational overexposure to solvents with permanent brain and nervous system damage. INGEST: NAIF

N-BUTANE: ACUTE: SKIN: Frostbite. EYE: Frostbite may damage eyes. INHAL: Drunkenness. Asphyxiant. INGEST: A gas under normal atmospheric conditions is unlikely to be ingested. CHRONIC: SKIN: NAIF. EYE: NAIF. INHAL: NAIF. INGEST: NAIF.

2-BUTANONE (METHYL ETHYL KETONE): ACUTE: SKIN: Causes skin irritation. EYE: Causes eye irritation. INHAL: Attacks central nervous system and lungs. Irritation of nose and respiratory tract. Symptoms include headache, dizziness and vomiting. INGEST: Expected to be non-toxic based on literature reports that the LD50=2737 mg/kg (rats). Enhances toxicity of n-butyl ketone. CHRONIC: SKIN: NAIF. EYE: NAIF. INHAL: NAIF. INGEST: NAIF.

BUTYL ALCOHOL (N-BUTANOL): ACUTE: SKIN: Causes skin irritation and dermatitis. EYE: Causes irritation and inflammation. INHAL: Irritates the nose and eyes. Affects lungs, thorax and breathing. INGEST: Expected to be non-toxic based on literature reports that the LD50=790 mg/kg (rats). CHRONIC: SKIN: NAIF. EYE: NAIF. INHAL: NAIF. INGEST: NAIF.

DIACETONE ALCOHOL: ACUTE: SKIN: Causes skin irritation. EYE: Eye irritation and tissue damage. INHAL: Irritation of nose and throat. Drunkenness. INGEST: Drunkenness. CHRONIC SKIN: NAIF. EYE: NAIF. INHAL: NAIF. INGEST: Bizarre symptoms may result from the denaturants present in industrial alcohols.

ETHANOL, 2-BUTOXY (BUTYL CELLOSOLVE): ACUTE: SKIN: Penetrates intact skin. Depresses central nervous system. Kidney injury and blood in the urine. Expected to be toxic by skin absorption based on literature reports that the LD50=490 mg/kg (rabbits). EYE: Causes eye irritation. INHAL: Causes behavioral changes, headaches. INGEST: Expected to be non-toxic based on literature reports that the LD50=1480 mg/kg (rats). CHRONIC: SKIN: NAIF. EYE: NAIF. INHAL: NAIF. INGEST: Affects liver, kidneys and lymphoid system. Causes destruction of red blood cells and blood in urine.

IRON OXIDE: ACUTE: SKIN: NAIF. EYE: Dust may irritate eyes. INHAL: NAIF. INGEST: NAIF. CHRONIC: SKIN: NAIF. EYE: NAIF. INHAL: The inhalation of fumes or dust may cause an apparent benign lung disease which is called siderosis. This disease is reported not to be disabling, but makes x-ray diagnosis of other lung conditions difficult or impossible. INGEST: NAIF.

ISOPROPYL ALCOHOL: ACUTE: SKIN: May cause mild irritation of skin. EYE: May cause eye irritation. INHAL: Drunkenness at very high concentration based on animal studies. INGEST: Drunkenness. CHRONIC: SKIN: NAIF. EYE: NAIF. INHAL: NAIF. INGEST: Bizarre symptoms may result from the denaturants present in industrial alcohols.

LEAD CHROMATE: ACUTE: SKIN: NAIF. EYE: Causes eye irritation. INHAL: Effects are non-specific. Decreased physical fitness, headache, constipation and stomach pain. Affects central nervous system. Overexposure can cause convulsions, coma and death. INGEST: Classical lead toxicity. Refer to inhalation of lead chromate. CHRONIC: SKIN: NAIF. EYE: NAIF. INHAL: Affects kidney function. Disturbs the blood chemistry. Reduces the number of red blood cells aqd causes a paleness of the skin. INGEST: Affects the blood, stomach and intestines, nervous and reproductive system. Suspect human carcinogen.

2-METHYL-PROPANE (ISOBUTANE): ACUTE: SKIN: Frostbite. EYE: NAIF. INHAL: An asphyxiant. Vapors affect the central nervous system causing dizziness, disorientation and excitation. INGEST: A gas under normal atmospheric conditions is unlikely to be ingested. CHRONIC: SKIN: NAIF. EYE: NAIF. INHAL: NAIF. INGEST: NAIF.

2-PENTANONE, 4-METHYL (METHYL ISOBUTYL KETONE): ACUTE: SKIN: Causes skin irritation. Dermatitis. EYE: Causes eye irritation. INHAL: Causes irritation of mucous membranes. Attacks central nervous system. Symptoms include muscle weakness, sensory defects, headache, drunkenness and coma. INGEST: Expected to be non-toxic based on literature reports that the LD50=2080mg/kg (rats). CHRONIC SKIN: NAIF EYE: NAIF. INHAL: NAIF. INGEST: NAIF.

PROPANE: ACUTE: SKIN: Frostbite. EYE: NAIF. INHAL: An asphyxiant. Vapors affect the central nervous system causing dizziness, disorientation and excitation. INGEST: A gas under normal atmospheric conditions is unlikely to be ingested. CHRONIC SKIN: NAIF. EYE: NAIF. INHAL: NAIF. INGEST: NAIF.

TITANIUM DIOXIDE: ACUTE: SKIN: NAIF. EYE: May irritate eyes. INHAL: Nuisance Dust. Irritates mucous membranes and lungs. Aggravates existing breathing or respiratory tract impairment. INGEST: NAIF. CHRONIC: SKIN: NAIF. EYE: NAIF. INHAL: Can causes abnormal tissue growth in the lungs. INGEST: NAIF.

TOLUENE (TOLUOL, LACOLENE): ACUTE: SKIN: May cause irritation of the skin by drying, producing dermatitis. EYE: May cause reversible eye irritation. INHAL: Attacks liver and kidneys. Can cause central nervous system depression. Symptoms include headache, dizziness, fatigue, incoordination, collapse and coma. INGEST: Expected to be non-toxic based on literature reports that the LD50=5000 mg/kg (rats). CHRONIC SKIN: NAIF. EYE: NAIF INHAL: NAIF. INGEST: NAIF.

XYLENE (XYLOL): ACUTE: SKIN: Defatting agent. Produces drying, redness and blistering. EYE: Can cause irritation. INHAL: Irritant and narcotic. Symptoms include headache, vomiting, drunkenness, loss of consciousness and death. Affects Lungs, Thorax, Kidney and Liver. INGEST: Expected to be non-toxic based on literature reports that the LD50=4300 mg/kg (rats). CHRONIC: SKIN: NAIF. EYE: NAIF. INHAL: Causes liver impairment, kidney failure and hemorrhages in the brain. INGEST: NAIF.

EMERGENCY FIRST AID

INHALATION: Remove to fresh air. If not breathing, begin mouth to mouth resuscitation. Seek medical attention. **EYE CONTACT:** Remove contact lenses (if wearing) and flush eyes with water for 15 minutes. Seek medical attention to check for possible irritation. **SKIN CONTACT:** Wash hands with mild non-abrasive soap and water. **INGESTION:** Seek medical attention.

SECTION 7 HANDLING, STORAGE AND USE PROCEDURES NORMAL STORAGE AND HANDLING: Store in well ventilated areas away from sources of ignition as damaged or leaking cans will release propellant which is highly flammable, heavier than air and may travel long distances to a source of ignition and flash back causing the container to burn or explode. post areas "no smoking or open flames." Do not store at temperatures above 120 F (49 C) or in direct sunlight as can may overheat and burst releasing the highly flammable propellant. Cool overheated cans if possible. Do not store near oxidizing agents. Keep out of the reach of children. NORMAL USE: Use only with adequate ventilation, ensuring fresh air entry during use as breathing vapors can cause dizziness, unconsciousness or coma. If eye watering, headache or dizziness is experienced, increase ventilation or seek fresh air. Vapors will accumulate readily and are potentially expossive. Use only around explosion proof equipment. Do not spray near sparks, heat or open flame as propellant may ignite creating a fire hazard. Wear protective goggles if mist is present or if any possibility of eye contact exists. Wear NIOSH approved respirator if vapors approach TLV. DO not drop container as it may dent or use a deformed container. A deformed container has reduced expansion space and may develop dangerous pressure causing it to burst in a violent manner. Do not puncture can. Wash hands after using. Intentional misuse by deliberately concentrating and inhaling the contents of the aerosol can be harmful or fatal. Do not take internally. Do not smoke when spraying or if vapors are present. Read and observe cautions and warnings on container label. STEPS TO BE TAKEN IN CASE OF LEAKS OR SPILLS: If a can develops a leak, move it outside or to a well ventilated area immediately to prevent accumulation of the flammable propellant which is potentially explosive. If leaking containers are found in a storage area eliminate all ignition sources. Ventilate to reduce and remove the propellant fire hazards before entering or using equipment in these areas. Absorb liquid with inert material using non-sparking tools. Vapor levels exceeding TLV may be present. WASTE DISPOSAL METHODS: Do not incinerate as container may explode. Do not discard in compactor as contents may be released in a dangerous manner resulting in fire or explosion. Dispose of in accordance with applicable federal, state and local laws, regulations, rules, orders and ordinances.

SECTION 8 PERSONAL PROTECTION INFORMATION RESPIRATORY PROTECTION: Atmospheric levels should be maintained below the exposure guidelines. Use approved air-purifying respirator to remove solid airborne particles of overspray during spray application. For emergency and other conditions where the exposure guideline may be greatly exceeded, use an approved positive pressure self-container breathing apparatus. VENTILATION: Ensure fresh air entry during use. If TLV levels are approached or any discomfort is experienced provide positive mechanical ventilation. PROTECTIVE GLOVES: Use to prevent prolonged or repeated skin contact. EYE PROTECTION: Wear protective goggles to prevent eye contact.

SECTION 9 FIRE AND EXPLOSION HAZARD DATA FLASH POINT= -25 F (-32 C). Method used: T.O.C. FLAMMABLE LIMITS IN AIR (% BY VOLUME): LEL (lower)=0.9 UEL (upper)=12.8 EXTINGUISHING MEDIA: Foam, carbon dioxide, dry chemical or water fog. SPECIAL FIRE FIGHTING PROCEDURES: Wear positive pressure, self-contained respiratory equipment. Exposure to temperature above 120 F may cause the container to burst, releasing the highly flammable propellant. Water spray used to cool the containers during fire conditions may help prevent rupture. UNUSUAL FIRE AND EXPLOSION HAZARDS: Treat as cylinders of compressed flammable gas. Propellant vapors are heavier than air. In case of rupture, ventilate as to prevent concentrations from reaching flammable levels. Decomposition and combustion products may be toxic.

NOTICE

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